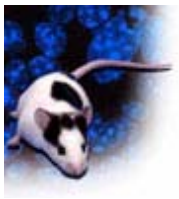

NCI-FREDERICK ANIMAL CARE AND USE NEWSLETTER

July 2004

NEWSLETTER CONTENTS

A Special Thanks …

The ACUC would like to thank all of the veterinarians, facility managers, technicians, animal caretakers, investigators, and animal users for their assistance during the recent semiannual facility inspections and program review. We are very fortunate to have employees that are dedicated to ensuring quality animal care and use at the NCI-Frederick.

Animal Care and Use Introductory Online Training Course

The NCI-Frederick Animal Care and Use Committee would like to introduce its new *Animal Care and Use Introductory Online Training Course*. This course was designed to provide new employees with a basic overview of issues pertaining to the care and use of animals at the NCI-Frederick. All individuals listed on an NCI-Frederick Animal Study Proposal will be required to have taken *The Care and Use of Animals in Laboratory Research* lecture course or this new online training course before approval of the study will be released. This online course does not replace the requirement for all employees to attend one lecture during their employment with the NCI-Frederick. The new online training course can be found at http://web.ncifcrf.gov/rtp/lasp/intra/acuc/fred/LASPtraining/refusers/index.html. Please contact the ACUC Office (ahaltm@ncifcrf.gov) if you have any questions or concerns.

Unauthorized Procedures Conducted on Animals

The ACUC is required by Federal law to review and approve all procedures conducted on live animals at the NCI-Frederick in advance. Investigators **must** ensure that all procedures conducted on live animals are included in an approved Animal Study Proposal. If during the course of your experiment, you and/or your staff determine that refinements, modifications, or additions are required to fulfill your research objectives … **you must submit a modification to the ACUC for review and approval before proceeding**. This can include (but is not limited to) diet changes, increase/decrease in injection volumes, requests for blood collection, increase in your animal numbers, addition of surgical procedures, transportation changes, strain additions, staff additions, location changes, etc. Conducting a procedure on a live animal that has not been approved by the ACUC **in advance** can result in the suspension of your animal activities. The ACUC will do its best to accommodate requests for modification in a timely manner. However, please keep in mind that the ACUC has minimum requirements that must be met to ensure compliance with Federal laws. Please contact the ACUC Office (ahaltm@ncifcrf.gov) if you have any questions or concerns.

Mouse Hepatitis Virus Update

To date there have been no additional cases of MHV in NCI-Frederick animal facilities. It does appear that all of our containment practices were successful. We appreciate the tremendous support of the scientific and animal facility staff members.

Pinworm Treatment Update

The second and third floors of Building 571 are being treated for pinworms (Aspiculurus tetraptera). We are in week two of a five-week pinworm eradication protocol. As expected, the mice are doing quite well on their medicated feed. Again, thanks to all scientific staff members for limiting visits and activity in 571 as much as possible. And finally thanks to the LASP staff for making the intricate husbandry logistics work.

Human Tumor Cell Lines

If you are using human tumor cell lines in your animal research studies, please be sure that the following requirements have been met prior to use in animals:

- The lines were approved by the ACUC as part of your ASP or as a subsequent modification
- Negative MAP/RAP test results were provided to the ACUC Office
- Human Pathogen test results were provided to the ACUC Office

MAP/RAP and Human Pathogen Testing should be coordinated through your animal facility manager. Please contact the ACUC Office (ahaltm@ncifcrf.gov) if you have any questions or concerns.

Revised Guidelines and Policies

The ACUC has recently revised the following Guidelines and Policies. Please ensure that you and your staff review these guidelines and incorporate the revisions as they apply to your research study.

EAE/Paralysis Clinical Assessment Guidelines
Guidelines Involving Experimental Neoplasia
Endpoints in Animal Study Proposals
Guidelines for Rodent Euthanasia

http://web.ncifcrf.gov/rtp/lasp/intra/acuc/fred/guidelines_nci.asp

Mouse Identification

Permanent and reliable mouse identification is a critical part of experimental usage. Even with proper application and positioning by competent personnel, ear tag usage in mouse identification often leads to complications whereby: (1) Ear infection necessitates removal of the tag and twice daily treatment with topical medication by animal facility personnel. (2) Chronic inflammation/infection often progresses to hyperplasia, osseous metaplasia, or neoplasia of the pinnal cartilage.

Other identification methods, such as ear notching, are readily available and generally result in fewer unidentified mice (tag-less) and fewer mice to re-genotype prior to use in an experiment. Also avoided is the unwanted introduction of confounding variables into the experimental paradigm. Example: Cytokine activation/release during inflammation and infection of the ear.

Laboratory Animal Medicine, (LAM), is currently researching ear tags made out of plastic or inert materials. We will provide more information in a future newsletter. Please contact your animal facility manager or the LAM staff at 301-846-5195 for more information on alternative animal identification techniques.

(1) Cover CE, Keenan CM, Bettinger GE. Ear tag induced Staphylococcus infection in mice. Lab Anim. 1989 Jul; 23(3):229-33.
(2) Waalkes MP, Rehm S, Kasprzak KS, Issaq, HJ. Inflammatory, proliferative, and neoplastic lesions at the site of metallic identification ear tags in Wistar[Crl:(WI)BR] rats. Cancer Res. 1987 May 1;47(9):2445-50.

Tissue Collection for RNA Recovery and Other Complex Procedures

The expert removal, dissection and preservation of tissue is a key element in any research process involving the downstream analysis of animal tissues. At PHL, necropsy prosectors are dedicated to the task of gross necropsy. They undergo a minimum of six months of training supervised by senior staff as well as VPS pathologists.

RNA extraction can be a challenging task especially when the target tissue is high in RNAses and RNA content degrades within moments of death. PHL has recently completed the tissue collection phase of the Mouse Transcriptome Project. 96 different tissue regions were successfully harvested, homogenized and submitted for RNA extraction. This exercise has allowed us to develop a set of complex protocols that guarantee a high rate of successful RNA recovery suitable for many downstream applications. Frequently, downstream analysis can be very costly, and time consuming, harvesting high quality RNA the first time will conserve valuable resources.

For studies with a significant pathology element, the gross necropsy is a key element in data collection. Complex necropsy protocols must be followed, all gross lesions described using acceptable, standard nomenclature, and tissue collection must be thorough and accurate.

Visit PHL at … http://web.ncifcrf.gov/rtp/lasp/phl/

For additional information or assistance …
please visit the ACUC website at

http://web.ncifcrf.gov/rtp/lasp/intra/acuc/fred/main.asp

The ACUC is always interested in new members to assist the committee. If you are willing to volunteer as an ACUC member or any of it's subcommittees, please contact the ACUC Office at ahaltm@ncifcrf.gov

Regulations and Policies

Public Health Service Policy
http://grants.nih.gov/grants/olaw/references/phspol.htm

Guide for the Care and Use of Laboratory Animals
http://www.nap.edu/readingroom/books/labrats/